

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006749**Date Inspected:** 14-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** Steve Barnett**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Hinge-K Components**Summary of Items Observed:**

Summary of Items Observed: On this date, Caltrans Quality Assurance Inspector (QA) Clete Henke was present at Oregon Iron Works, Inc. (OIW) in Clackamas, OR for observation of fabrication of the Hinge K Pipe Beams and related activities including in process welding and OIW Quality Control (QC) visual and nondestructive testing. The following observations were recorded:

OIW Fabrication Shop-Bay 3

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-6:

a125 stiffener ring to a124-9 Fuse

The QA Inspector noted upon arrival that OIW welder Bounheune Savanh (WID S74) was engaged in an attempt to fit-up a125 ring stiffener for PJP joint WM3-11. Welder S74 was unable to achieve acceptable fit-up at weld joint WM3-11 and the a125 stiffener ring was eventually removed to FCAW buttering fixture for build-up. The QA Inspector randomly monitored welder S74 as he performed FCAW buttering in the flat (1F) position in accordance with OIW provisional welding procedure 3049. (WPS 3049 is pending approval) The QA Inspector observed OIW QC Inspector Steve Barnett regularly monitoring and recording the in process FCAW parameters. The QA Inspector also intermittently observed in process welding parameters and determined that the FCAW parameters and minimum preheat/interpass temperature appeared to be in general compliance with the contract requirements -- (25 volts, 250 amperes, 203 mm/min travel speed). After build up and grinding, the stiffener ring was replaced in Fuse Section a124-9 for fit-up. The QA Inspector was later contacted by OIW QC Inspector Steve Barnett and informed that OIW QC had completed Visual Inspection (VT) of fit-up at WM3-11, indicating that fit-up was acceptable. The QA Inspector performed VT at the above referenced joint and found that fit-up tolerances appeared to be in general compliance with the contract requirements. The QA Inspector subsequently

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intermittently monitored OIW welder Bounheune Savanh (WID S74) during in progress Submerged Arc Welding (SAW) at weld joint WM3-11 joining a125 stiffener ring to a124-9 Fuse Section. The QA Inspector observed as OIW QC Inspector Steve Barnett performed Magnetic particle Testing (MT) and Visual Inspection (VT) of completed root passes at weld WM3-11. Mr. Barnett stated that he had located no rejectable indications. The QA Inspector subsequently performed 100% VT at the location noted above finding the root pass to be in general compliance with contract documents. The QA Inspector intermittently observed as welder S74 continued to deposit SAW fill and cover passes in the flat (1G) position in accordance with approved welding procedure 4020. The QA Inspector noted the OIW welder was maintaining continuous preheat utilizing two torches. An OIW helper was observed assisting welder S74 during SAW process. The QA Inspector observed OIW QC Inspector Steve Barnett regularly monitoring and recording the in process SAW parameters. The QA Inspector also intermittently observed in process welding parameters and determined that the SAW parameters and minimum preheat/interpass temperature of 350deg F appeared to be in general compliance with the contract requirements -- (30 volts, 460 amperes, 407 mm/min travel speed).

Hinge-K Pipe Beam Base Assembly 102A-1:

a111-1 forging to a110-4 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-2:

a111-2 forging to a110-2 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-3:

a111-3 forging to a110-3 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-4:

a111-4 forging to a110-1 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-1:

a124-6 to a124-7

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-2:

a124-3 to a124-11

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-4:

a124-13 to a124-4

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-5:

a124-14 to a124-2

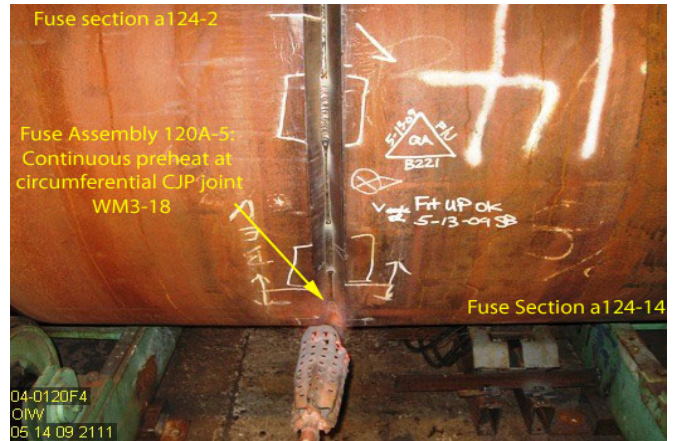
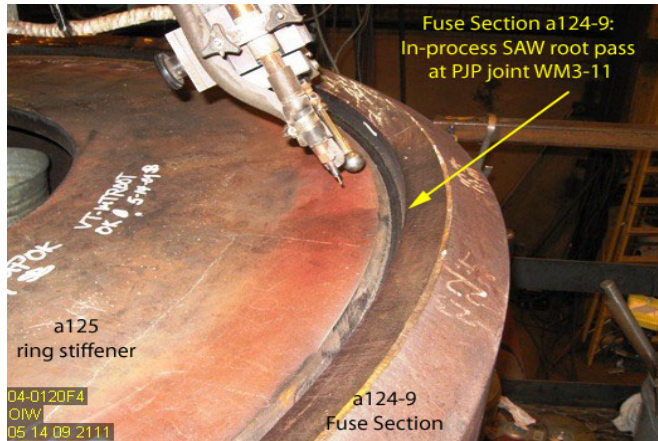
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With the exception of continuous preheat, the QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Material, Equipment, and Labor Tracking:

The QA Inspector performed verification of personnel involved with this project and equipment in use. The QA Inspector accounted for 2 OIW production personnel and 1 Quality Control Inspector present on this date.



Summary of Conversations:

As noted in the body of the report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677 , who represents the Office of Structural Materials for your project.

Inspected By: Henke,Clete

Quality Assurance Inspector

Reviewed By: Adame,Joe

QA Reviewer
